

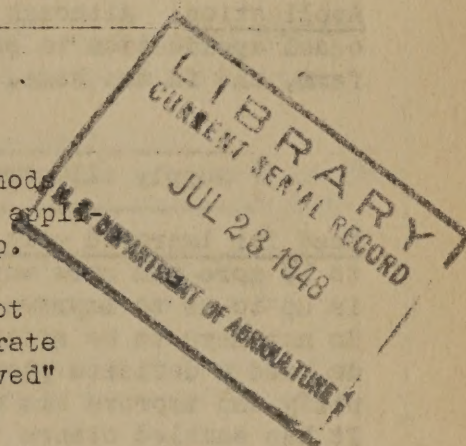
## \* JOB METHODS TRAINING \*

## Outline for a 2-Hour Appreciation Session \*

Prepared for those who have participated  
in the 10-hour course

The appreciation session of JMT is a complete description and demonstration of how to improve the way a job is done. Those who hear and see this demonstration should have a clear idea of how a job can be improved. Those who have participated in the 10-hour course have had an additional chance to practice and use the method on a job of their own. The 32-hour JMT institute provides training in how to conduct a 10-hour course. This summary is for those who have had only the 10-hour course, but wish to explain to others how work methods can be improved.

- I. Introduction - What is job methods training, its origin, use, and application to this particular group.
- II. Demonstration - Select a job not familiar to the group, demonstrate the "old" method and an "improved" method.
- III. Discussion - Outline the four-step work improvement plan; show how it was used to improve the sample job.
- IV. Application - Demonstrate the use of the four-step plan with a job familiar to the group.





## THE INTRODUCTION

Be sure the members of the group are arranged so they can see and hear easily.

The first step in correct instruction is to prepare the group. Establish a friendly attitude, tell them what you are going to do, find out what they know about it, and get them interested in learning more.

Rework all ideas into your own words, using personal and local illustrations.

Job methods training (JMT): There is a shorter, easier, safer, cheaper way to do almost every job. JMT is a plan that will help you study your way of doing a job and work out a better and easier way to do it.

Origin: JMT was developed during the war to meet the need for making the best use of available manpower. It was used in industry very effectively. JMT is based on the premise that the employee is the one person who knows the details he goes through in doing a job. He is, therefore, in a good position to eliminate unnecessary operations and to simplify his work.

Application: Although developed primarily for use in industry, JMT has equal application to agricultural extension work--in the office, on the farm, and in the home.

Supply illustrations to fit the interests of the group.

Need for improved work methods: In today's hustle and bustle there seems to be more and more work to be done, often with less help to do it. It is up to us to improve our work methods so as to get the job done. We do not have to be efficiency experts to make these improvements. But we do need a definite plan to follow--a plan that will enable anyone to simplify and improve his way of doing a job. We have such a plan. It works. It has enabled others to make improvements. Let's see what the plan is and how it works on jobs that we do.



## THE DEMONSTRATION

When you took the 10-hour course you, no doubt, saw the demonstration of assembling radio shields. Any other relatively short, simple job might be used. Experience indicates, however, that assembling the shields is usually best, provided the group does not know it. Using an unfamiliar job for the demonstration permits focusing attention on principles.

Fundamentals of this plan, like any other, are best explained by demonstrating how they were applied to an actual job--to show how a job was improved by the use of the plan.

The job selected for the demonstration purposely was not taken from your work because right now we are concerned with basic principles. Later on we will see how they apply to jobs with which you are familiar.

### Materials Needed for Radio Shield Demonstration

Demonstration kit consisting of: Enough of the following for everyone:

- |                                 |  |
|---------------------------------|--|
| "Brass" and "copper" cards.     | Old method radio shield break-down.          |
| 1 "TOP" stamp and stamp pad.    | Improved method radio shield break-down.     |
| 2 staplers.                     | JMT card or its equivalent.                  |
| 1 fixture for holding staplers. | Old method break-down--application job.      |
| 2 devices for holding cards.    | Improved method break-down--application job. |
| 2 discard bins (wastebaskets).  | Proposal sheet--radio shield.                |
| 1 carrying or "tote" box.       | Proposal sheet--application job.             |

You will want to study the attached diagrams and practice the demonstrations before attempting to conduct a session. Before the session starts the following things should be ready:

1. Have a finished shield on the workbench; also one copper and one brass sheet.
2. Have one stapler, stamp, and stamp pad on workbench.
3. Have hand-out materials ready in order of need.
4. Have a supply of brass and copper sheets in bins located 6 feet back of workbench and to the right of it.
5. Have brass and copper scrap bins located at right end of workbench.
6. Have carrying box on chair to left of workbench two or three steps.
7. Have extra stapler, fixture, and holding devices out of sight of group, but convenient to get to in the order needed.



The demonstration you will see is part of a process used in making radio shields. The job consists of inspecting, assembling, riveting, and packing radio shields. Let's see how this job was done before any improvements were made.

Demonstrate what Bill Brown does as you tell the following story.

The materials handler brought the "brass" and "copper" sheets from the stamping department in boxes and delivered them to supply bins about 6 feet from the workbench.

Get copper sheets. Bill Brown, the operator, walks these 6 feet to the supply box of copper sheets, picks up 15 or 20, not knowing how many might be damaged, and carries them back to the workbench.

Lay out and inspect. At the bench he lays out 12 sheets in three rows, four to a row. As he lays them out he inspects both sides of each sheet for scratches and dents. Rejected sheets are dropped into copper scrap bin located at right end of bench. (Show position as you discard first defective sheet.) (Discard two or three as you lay out the 12 sheets.)

Get brass sheets. After laying out the 12 sheets he takes the remainder back to the copper supply bin, steps over and picks up 15 to 20 of the brass sheets from the brass supply bin.

Lay out and inspect. Returning to the bench he inspects and lays out 12 brass sheets on top of the copper sheets. Defective brass sheets are discarded in brass scrap bin. (Find and discard two or three defective brass sheets.) Remaining brass sheets are taken back to the supply bin and Bill Brown returns to his bench.

Crisscross sets. He stacks the 12 sets of sheets crisscross near the right-hand side of the bench and then sits down at the bench.

Assemble and rivet. Picking up the top set he very carefully lines up the two sheets so the edges are even and the holes match. This calls for good eyesight and experience. When sheets are aligned he rivets, starting in the upper left-hand corner, then proceeding clockwise.

Stamp "TOP" on shield. The riveted shield is then turned and placed on bench where the word "TOP" is stamped in the upper right-hand corner. The finished shield is placed on left side of bench. (Rivet and stamp two or three sets to show how it is done, then put unfinished sets on finished pile as you rise.)

Place in "tote" box. The completed shields are then placed in a carrying box located to the left a couple of feet. (Stand at carrying box while you explain.) Bill Brown then returns to his bench and repeats the process over and over until the carrying box is filled. (It weighs 75 pounds when filled.)



Weigh box. He then carries it to scale 50 feet away (carry to imaginary scale) where he weighs it, puts in weight ticket, and sets off scale. (Stay at scale while you explain what happens next.) When two ~~or~~ three boxes of finished shields have accumulated near the scale the materials handler loads them on a hand truck and takes them the 100 feet to the packing department. (Walk over to imaginary packing department.) There the packer removes them from the box, inspects, packs 200 to a wooden shipping case, closes, weighs, and addresses for shipment. The empty carrying boxes are returned to riveter's bench by materials handler.  
As you say last line return to workbench.

## DISCUSSION OF JMT PLAN

Now how did Bill Brown go about improving this job? The plan he followed is rather simple and consists of four steps.

Let's see how Bill Brown applied them. This will show how we can use the plan to improve jobs that we do. Following these same four steps will help you get more and better work done in less time and with less effort. We will take these four steps up one at a time and discuss them as we go.

To improve his job the first thing Bill Brown had to do was to get a clear picture of the job as he was doing it. To do this--

(Put on board as you explain)

Step I Break down the job

List ALL details

it was necessary for him to make a break-down of the job. The job break-down is the starting point for method improvement. It is a complete, orderly listing, step by step, of all the things done in performing the job, including all the material and equipment. A job break-down is not difficult to make, but it must be made carefully and in complete detail.

Ask group to tell you the details of the job demonstrated, one at a time. List them on the board. If any details are missed or lumped together, point out how easy it is to overlook some details unless they are carefully listed. List only enough details to be sure the group gets the idea of how a break-down is made.

Hand out and discuss Bill Brown's "old method" break-down. Explain use of notes column.

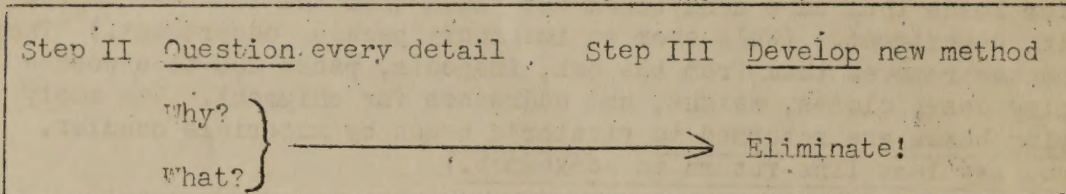
The best place to make a break-down is on the job and not from memory.

When you make a break-down of a job, all persons concerned should know what you are doing and why you are doing it. Their cooperation now will make it easier when the new method is put into use.



Only after Bill Brown had a complete picture of the job was he ready for Steps II and III. These two steps are done together.

(Add to board as you explain.)



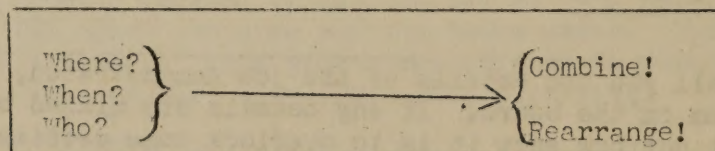
First he asks, "Why is it necessary?" of each detail on the break-down in an effort to eliminate unnecessary details. When he gets no clear-cut answer to the WHY question then he asks a check question, "What is its purpose?" If the detail is not necessary or has no specific purpose it can be eliminated and no further questioning of it is necessary.

Apply the WHY and WHAT question to each detail on the old method break-down of the job demonstrated. By careful questioning show how some of the details were eliminated. It will be desirable to act out some details as you question their need in order to drive home the questioning attitude one must have toward his work. Have the group mark an E beside each item that is unnecessary and can, therefore, be eliminated.

Items that Bill Brown eliminated in the radio shield demonstration are 1, 3, 4b, 5, 6, 8, 9b, 10, 11, 21, 23, and 24. This is 12 items, or 40 percent of the 30 original details.

After eliminating all the unnecessary details Bill Brown was then ready to go back and examine the remaining necessary details. Of each necessary detail he asks, "Where should it be done?" "When should it be done?"

(Add to board as you explain.)



and "Who should do it?" The answers to these three questions will give him clues as to details that can be combined or rearranged in a different sequence.

Lead group through the questioning to see if any of the necessary details can be combined or rearranged. Again it may be desirable to act out certain details to see if they can be combined or rearranged. Have them mark a "C" or "R" opposite each item combined or rearranged to indicate action taken.

For the radio shield demonstration Bill Brown was able to combine details 12, 13, 22, 26, and 27, and rearrange details 2, 4, 7, 9, and 25.



After combining and rearranging all possible details Bill Brown went back over the details that had not been eliminated, combined, or rearranged. He was now ready to question, "How is the best way to do these details?"

(Add to board as you explain.)

How? —————

→Simplify!

As you lead the group in applying the HOW question to each detail watch for ways to do the work more easily. Try out various suggestions as they are made to get group reaction as to practicability. The simplifying techniques that Bill Brown developed are as follows:

<u>Problem</u>	<u>Solution and Principle Involved</u>
Stretching to reach sheets at right rear of bench.	Move stacks of sheets closer to operator in " <u>proper work area</u> " where they are easy to reach.
Using only right hand to pick up sheets while left hand holds.	Let " <u>both hands do useful work</u> " by picking up brass and copper sheets with both hands simultaneously.
Awkwardness of reaching across to pick up brass sheets with left hand.	Place brass sheets in the " <u>best place in proper work area</u> "—to left of operator.
Difficulty of getting sheets assembled—too much twisting and turning of sheets.	" <u>Preposition material</u> " in advance by placing brass and copper sheets face down with clipped corner toward the outside.
Left hand holds sheets while right hand rivets.	" <u>Use holding device</u> " to line up sheets and hold while riveting with both hands.
Sheets slip and are hard to pick up one at a time.	" <u>Use holding devices</u> " with slanting bar to fan out and hold sheets.
Have to leave seat to dispose of damaged sheets.	Cut two slots in " <u>proper work area</u> " of workbench.
Have to reach when stacking finished shields at left-hand edge of work bench.	Place finished shield in " <u>best place in proper work area</u> " which is just in front of holding device.
This led to automatic counting—20 shields when level with top of holding device and 200 per shipping box.	

Now let's see what the job looks like after making the improvements that you have suggested and others that Bill Brown worked out.

Demonstrate the new method.



When an improved method has been developed it is desirable to list the details of the new method. This is made in the same manner as when Bill

(Add to board as you explain.)

List details of new method.

Brown made the break-down of the original method. This break-down is valuable in that it will help to focus your attention on the job and suggest further improvements that might be made.

Then, too, if someone else is going to do the job you will find the break-down a useful tool in teaching the new method. Here is the improved method break-down Bill Brown made.

Hand out and discuss briefly Bill Brown's improved method break-down.

Remember the best new method is of no value unless it is put to work. Let us look briefly at the things Bill Brown had to consider to get his new method adopted.

(Add to board as you discuss each item.)

Step IV. Apply the new method.

Write - Sell - Approval - Use - Credit

Write up your proposal. He found it desirable to write up a proposal that set forth the changes needed to put the new method into use and the savings made by the new method. A proposal of this type provided a means of getting these points before those to whom he wanted to sell his new method. A good job of salesmanship demands that he have all the facts in a concise, easily understood form.

Hand out and discuss Bill Brown's proposal sheet.

Sell the new method. Everybody concerned with the new method must be sold on its use or it won't be given a fair trial. This means that the advantages of the new method must be explained and that they must be told how it will operate.

Get necessary approvals. Approval of all concerned means a more satisfactory trial of new method. The danger is we are apt to take approval for granted. Everyone likes to know in advance of changes that will affect them or their work.

Put new method to work. It is obvious that we want our new ideas for improvement put to work right away. See that they are kept in use until a still better method is worked out. Just one caution--don't be satisfied with the adoption of one good idea. Keep on questioning, searching for a better idea.

Give credit where credit is due. If anyone has helped you in planning the improved method be sure to give them credit. Giving credit stimulates ideas and invites continued cooperation and additional ideas.



## APPLICATION

To make the session most effective it is usually desirable to follow up the presentation of your sample job with another short job taken from work familiar to the group, whether it be office, farm, or home. The job you used when taking the 10-hour course may fill the bill.

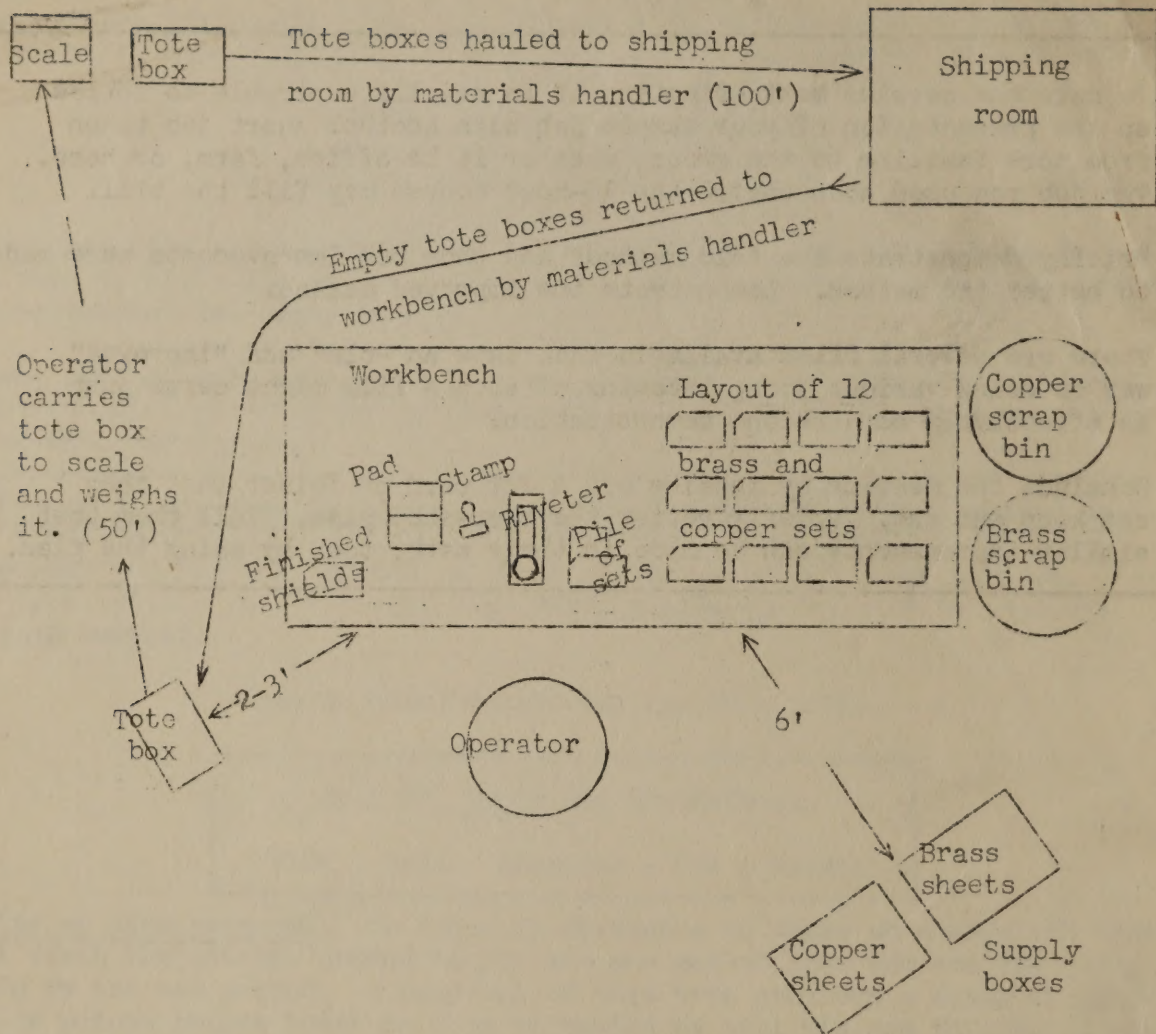
Briefly demonstrate the "old method" and show how improvements were made to better the method. Demonstrate the improved method.

There are several films available that show an "old" and "improved" way of doing various jobs. Showing of such a film might serve just as effectively as a second demonstration.

Conclude the meeting by handing out a JMT card or folder that they can keep and use. Briefly review the four-step plan. Tell them that similar improvements can be made in their work, too, by using the plan.



# OLD METHOD



## IMPROVED METHOD

